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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,440	02/09/2001	Kentaro Shiomi	60188-031	6677

7590

07/08/2005

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WASHINGTON, DC 20005-3096

EXAMINER

KIM, JUNG W

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/779,440

Applicant(s)

SHIOMI ET AL.

Examiner

Jung W. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-7 have been examined.
2. Applicant in the amendment filed on May 24, 2005 amended claims 1 and 2.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

4. The 112, 1st paragraph and 101 rejections to claim 1 are withdrawn as the amendment overcome the rejections.

Response to Arguments

5. Applicant's arguments, see pgs. 5-6, filed May 24, 2005, with respect to claim 2 have been fully considered and are persuasive. Specifically, Johnson does not teach a selection signal used as a key value to an encrypted circuit, wherein the selection signal selects a number of signals corresponding to the number of outputs of the original circuit from an output of a permutation circuit. The 103 rejection of claim 2 has been withdrawn.

Claim Rejections - 35 USC § 103

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. USPN 6,088,452 (hereinafter Johnson) in view of Collberg et al. "Manufacturing Cheap, Resilient, and Stealthy Opaque Constructs" (hereinafter Collberg).

7. As per claim 1, Johnson discloses a method for designing a circuit, comprising the step of encrypting provided circuit design data (Johnson, Abstract), the encrypting step includes the steps of:

a. Generating dummy circuit design data; converting the circuit design data into encrypted circuit design data by combining the circuit design data and the dummy circuit design data (Johnson, col. 12:9-20).

8. Johnson does not expressly disclose generating key data, wherein the encrypted circuit design data does not operate as targeted without inputting the key data into the circuit. Collberg discloses multiple opaque constructs wherein irrelevant code is inserted into an original code by means of a branch insertion transformation (Collberg, fig. 4(c)); an opaque predicate is set to a value (true) so that the branch operation correctly directs the operation of the program to the correct version of the code. This value is the key data of the obfuscation technique disclosed by Collberg. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made for the encryption step of Johnson to generate key data, wherein the encrypted circuit design data does not operate as targeted without inputting the key data into the LSI,

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since the insertion of dummy code by a branch insertion transformation instills more complexity and hence better obfuscation of the code design. Collberg, section 4.2, 1st paragraph. The aforementioned cover the limitations of claim 1.

Allowable Subject Matter

9. Claims 2-7 are allowed.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Communication Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W. Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

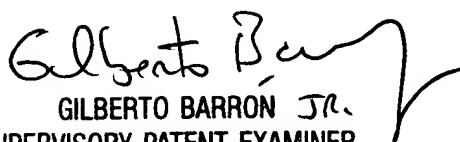
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JK

July 6, 2005

Jung W Kim
Examiner
Art Unit 2132



GILBERTO BARRON JR.
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